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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/718,045	11/20/2003	Louis J. Bartlo JR.	1772002US1AP	9295

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EXAMINER

HOANG, TU BA

ART UNIT PAPER NUMBER

3742

DATE MAILED: 03/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/718,045

Applicant(s)

BARTLO ET AL.

Examiner

Tu Ba Hoang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-44 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1,7-14,16-18,21,22,25-28,32-34 and 38-44 is/are rejected.
- 7) ☒ Claim(s) 2-6,15,19,20,23,24,29-31 and 35-37 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date ____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: ____.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 11-14, 16-17, 27-28, and 42-44 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 11 (and also 16) is incomplete for omitting essential structural cooperative relationships of elements such as the first header and the stub (recited at line 4), such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. It is unclear whether the stub is a part of the header or itself is the header as a whole.

Similarly, in claim 13, the recitation of "a first electrode" at line 4 renders the claim indefinite because it is unclear whether this first electrode the same as the first electrode recited in the preceding claim. Clarification is needed and if these electrodes are different, then essential structural cooperative relationships between them are suggested.

In claim 27, there is insufficient antecedent basis for "the...third reusable header(s)" recited at line 2 in the claim or from the preceding claim.

In claim 42, there are insufficient antecedent bases for "the recess and projection" recited at lines 1-2 in the claim or from the preceding claim.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 7-12, 18, 21-22, 25-28, 32-34, and 38 are rejected under 35 U.S.C. 102(b) as being anticipated by Zanner et al (US 5,373,529). Zanner et al shows a method of manufacturing electrodes (abstract, i.e., remelting metal alloys or consumable electrodes in vacuum arc furnace), in which a first electrode 30 is attached to a first reusable header or upper ram 32 and heated to a temperature sufficient to be melted and dripped into a molten metal 108 which is deposited into a crucible 46, the molten metal 108 is solidified to form a second electrode or ingot 106 (as shown in Figure 2), the second electrode or ingot 106 has at least a portion complementarily shaped to a second reusable header or stub or lower ram portion 56,64 which is placed in the crucible prior to the heating of the first electrode and is attached to the second header 56,64, wherein at least a section of the headers is manufactured from substantially the same metal as the electrode or ingot (column 5, lines 58-60), at least the second reusable header 56,64 comprises a base having a first and a second ends with a shafted 56 extending from the first end of the base (64) for reciprocal movement within the furnace and an attachment which comprises a shaped recess and a shaped projection forming a dovetail base portion (column 5, line 42) to releasably secure the ingot to the base (64) whereby one of the shaped recess and shaped projection is

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formed in the base and other shaped recess and shaped projection can be formed on the ingot with the recess is complimentary shaped to interlock with the projection and the first electrode 30 can be attached to the first header by interlocking complementarily shaped portions of the first electrode and the first header with threading fasteners or bonding or other conventional attachment methods (column 4, lines 60-62).

Claims 32 and 38-41 are rejected under 35 U.S.C. 102(b) as being anticipated by Shingo Inouye (US 3,391,239). Shingo Inouye shows a reusable header (Figure 2) comprising a base 39,41 having a first and second ends with a shaft 39 extending from the first end of the base, an attachment 40,42 for releasably secure an electrode 28 to the second end of the base 39,41, wherein at least a section 41 of the header is manufactured from the same metal material with the electrode and the section 41 is also a detachable stub which has an area complementarily shaped to the shaped portion of the header for interlocking with the header and the electrode 28 can be integrally bonded with the stub 41 by threaded attachment 42.

Claims 1, 18, and 32-34, 38-42 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Berry et al (US 2,955,333). Berry et al shows all features of the claimed invention including the header having a detachable stub 17 provided with recess and projection that form a dovetail shape 21 or 23.

Claims 2-6, 15, 19-20, 23-24, 29-31, and 35-37 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 13-14, and 16-17, and 43-44 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

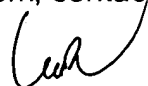
The following is a statement of reasons for the indication of allowable subject matter: The prior art of record does not show or fairly suggest the use of a second crucible whereby the second electrode can be positioned and heated in the manner recited in claims 2 and 19, the first electrode can be formed by bonding scrap metal pieces together in the manner recited in claim 23, the use of a clamp as recited in claim 35 and 43.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tu Ba Hoang whose telephone number is (571) 272-4780. The examiner can normally be reached on Mon-fri from 8:30AM to 6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robin Evans can be reached on (571) 272-4777. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Tu Ba Hoang
Primary Examiner
Art Unit 3742

March 09, 2005